



Nongame News



SPECTACULAR!

Winter 1984

1984 BALD EAGLE COUNT

Thirty-two bald eagles were spotted on January 6th and 7th when the New Jersey Division of Fish, Game and Wildlife's Endangered and Nongame Species Program conducted its annual mid-winter survey. Searches were done by air, boat and on the ground on the Delaware River from Lambertville to Milford, PA; on the Delaware Bay in Salem, Cumberland and Cape May counties; and in coastal Burlington and Atlantic counties. Compared with last year, 20 more bald eagles were counted.

Two eagles were spotted in the vicinity of the hack tower and release site, but no wing tags could be sighted so it could not be determined if they were New Jersey-released birds.

Noteworthy increases in wintering eagle numbers were recorded on the Upper Delaware River. Eight immature bald eagles; two adult bald eagles and one golden eagle were seen in the Dingman's Ferry area where none were recorded last year. Substantial increases were noted for the Delaware Bay as well; 17 bald eagles in 1984 compared to 8 in 1983.

Survey leaders Peter Dunne, John Kolo-dziej and Peter Plage were contracted to coordinate volunteers for the survey along with Endangered and Nongame Species Program staff and Division conservation officers. The data collected is provided to the National Wildlife Federation's Raptor Information Center for inclusion in the annual national bald eagle survey.

An Invitation to Become Involved

The Endangered and Nongame Species Program will be launching a new program this year to increase community involvement in wildlife by building and improving habitat, fact finding and education. This is going to be achieved through the appropriation of matching grants of up to \$1,000.00. The 1984 budget for this program will be \$10,000.00.

"Check-Off Conservation Grants" will be available to conservation groups, environmental commissions, school groups, 4H and others. These groups are already making significant contributions to wildlife habitat, recreation and education and their efforts can be enhanced by additional funding. The objectives of the program

are to increase local involvement in wildlife projects (especially in urban areas), and to improve knowledge and awareness of wildlife and wildlife's needs.

Projects that will be awarded grant money fall into three main categories: 1) habitat development and improvement, 2) education and 3) research. These categories can and will overlap. An example of an acceptable education/habitat improvement project might involve the planting and testing of wildlife use of various plants in a city environment.

Groups applying will be encouraged to focus on habitat as a limiting factor

Continued on page 3

Endangered and Nongame Species Program

Teachers To Go WILD:

Project WILD

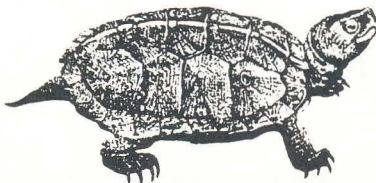
A curriculum package for all teachers will soon be available to New Jersey wildlife enthusiasts. Project WILD is now being used by 20 states (including neighboring Pennsylvania) and some Canadian provinces. It is an interdisciplinary series of activities concerning wildlife and our shared environment; it can be used to supplement a variety of subject areas.

This project was developed by the same group of progressive educators and wildlife agency personnel in 13 western states that developed Project Learning Tree. Project Learning Tree has been used throughout the nation since 1975 and in New Jersey since 1977. Although Project Learning Tree deals with forest management and Project WILD with wildlife, both programs stress the development of skills—critical thinking, analysis, decision-making, problem-solving and data collection. The materials were developed in western states, yet the concepts addressed are universal making the materials relevant to New Jersey.

Teachers can become a part of the program and use the materials to enrich classroom experiences. The materials are available to teachers only through workshops, but, both the workshops and the books are free to teachers. Workshops are scheduled to begin in the fall of 1984.

The cost of Project WILD is being underwritten by the Nongame Tax Check-Off Fund and the Hunter and Angler Fund of the Division of Fish, Game and Wildlife.

Curriculum supervisors, teachers and youth leaders are encouraged to call or write in for more information. Contact Mimi Dunne, Bob McDowell or Bob Byrne at (201) 637-4125 or write Pequest Trout Hatchery and Natural Resource Education Center, Pequest Rd., RR 1, Box 389, Oxford, New Jersey 07863.



Beach Nesting Birds Workshop

The Program will conduct a one-day working meeting on March 29th to coordinate and improve the research and management techniques employed for least terns, black skimmers and piping plovers. At present, these animals are managed by a variety of people on public and private lands. The goal of the meeting is to determine the best types of habitat manipulations and produce a management plan incorporating all the available expertise. It is hoped that standardized techniques will be developed so that all research efforts will be more productive. Any researchers or managers of coastal nesting habitat are invited to participate in the meeting to be held at Fort Hancock on Sandy Hook. For more information, contact Larry Niles at (609) 292-9400.

Offered Through NJ Audubon

HAWK WATCH PROGRAM

Debbie Keller, Pete Dunne and Rene' Kochenberger of New Jersey Audubon have developed a program to increase awareness of and appreciation for birds of prey. "Hawk Watch Program" is intended to be used primarily by middle and high school students in biology classes, although other subject areas can also be enhanced by the program.

New Jersey Audubon has recently completed a pilot project to gauge the effectiveness of the materials in New Jersey schools. The results were very positive; hawks are appealing to young people; they can be focused on to increase student interest in wildlife, and they can sensitize students to wildlife needs. Activities have been created using hawk observation data to improve math skills and introduce students to statistics and computer use. Other disciplines such as art can also be incorporated.

Audubon is currently making the program available to schools. For more information, contact Debbie Keller at (717) 435-0653 or New Jersey Audubon at (201) 891-1211.

Accolades, Again

Program staff would like to extend thanks, once again, to the Cook College Forestry and Wildlife Club at Rutgers University. For the past two years, these diligent students have made a significant contribution to the tax check-off promotional effort by stuffing envelopes for mailings to libraries, post offices, conservation groups, tax preparers, sporting goods stores and others. This tedious job was made successful through the coordination of the club president, Terry Ciuba. Special thanks to Terry, Dr. Len Wolgast, club advisor, and all the students who participated.

The Program has now been funded three years through the income tax check-off. This has been the sole source of funding for statewide endangered and nongame species wildlife work. Thanks are extended to New Jersey taxpayers who continue to make this work possible.

Become Involved, Continued from page 1

affecting wildlife. To receive application forms when available, names of interested groups and contact people should be sent to Check-Off Grants, CN 400, Trenton, New Jersey 08625.

A similar program called "West Virginia Cooperative Nongame Projects" was developed in that state this year. Fifty-one projects are scheduled to begin this year. West Virginia's nongame program is budgeting \$25,000.00 towards this program this year with each project receiving up to \$500.00. Some projects that will be done include the building of trails, bird houses and feeders supplemented by relevant educational materials.

Nongame News

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The Tenth Year:

Endangered and Nongame Species
Research & Management in 1984



N.J. Department of Environmental Protection

Division of Fish, Game & Wildlife • Endangered and Nongame Species Program

THE TENTH YEAR

Ten years ago, President Nixon signed the Federal Endangered Species Act into existence. That legislation is now regarded as a landmark in the struggle to save endangered species from extinction.

The Act gave national and international significance to a word which previously had meaning only to biologists. New Jersey's version of the act was passed in November of 1973. In early 1974, the Endangered and Nongame Species Project was created within the Division of Fish, Game and Wildlife and given a budget of \$70,000.00 to conduct research and manage 400+ nongame and endangered species in the state.

Ten years later, the Endangered and Nongame Species Project (now the Endangered and Nongame Species Program) has quadrupled its staff to eight zoologists working full-time with a budget of \$460,000.00. Important research and management projects ongoing since 1974 and new projects in 1983 are summarized in a free booklet "The Tenth Year - Endangered and Nongame Species Research and Management in 1984". For a copy of the booklet, send 88¢ (in stamps) for postage, to:

The Tenth Year
Pequest Trout Hatchery and Natural
Resource Education Center
Pequest Rd., RR 1, Box 389
Oxford, New Jersey 07863

Help Wanted:

Summer Employment Available

The Endangered and Nongame Species Program will hire five technicians for field work on four wildlife projects this summer. A combination of experience and education in the wildlife field is desirable. Project duties include field work and data processing. The jobs require that each technician be his/her own supervisor and be responsible to complete the assigned job.

The technicians will be working on each of the following projects.

1) Peregrine Falcon - April through July - Coastal - Toms River to Sea Isle City - technicians will be responsible for the maintenance of towers, bi-weekly check of nests throughout the breeding period, record keeping and coordination with Cornell University's Peregrine Fund.

2) Osprey - April through August - Coastal - Sandy Hook to Maurice River - technician will construct and put up osprey platforms, band young, assist in survey work and assist in summarizing data.

3) Colonial Waterbird - May through August - Coastal - technician will assist in the survey of populations and habitats of colonial waterbirds, management of selected sites, and summarizing data.

4) Bald Eagle - May through September - Cumberland County - three technicians will be assigned to the hack site in South Jersey. This will require living on the hack site from approximately July to September. The job will be to tend to the nesting eagles and the hack site. Some telemetry work will be required after the eagles are released. This job will be on a 24-hour, 7 day/week basis.

Each technician will be paid \$1,500.00 for the entire period of employment. Applicants should submit resume's to JoAnn Frier, Program Manager of the Endangered and Nongame Species Program, New Jersey Division of Fish, Game and Wildlife, CN 400, Trenton, New Jersey 08625.

Water-We Can't Live Without It

The New Jersey State Federation of Sportsmen's Clubs is pleased to announce their fourth annual special poster contest to celebrate National Wildlife Week. This year's theme is "Water - We Can't Live Without It". This theme was chosen to remind us that we must conserve and respect water.

All New Jersey residents through the age of 18 may submit entries related to the theme: "Water - We Can't Live Without It". A variety of drawing media may be used on 8½" X 11" or 12" X 18" paper. The deadline for submitting entries is April 15, 1984. Mail entries to Wildlife Art Contest, Jim Brooker, 114 James Avenue, Cranford, New Jersey 07016.

Teachers Have CLASS

An exciting, environmentally-oriented curriculum guide developed by the National Wildlife Federation is being offered to New Jersey teachers by the Department of Environmental Protection. The CLASS project was developed for junior high teachers to provide a "hands-on" approach to environmental education. The activities are a series of investigations in energy use; environmental issues; forest and watershed management; hazardous substances; wetlands and wildlife habitat management. The aim of the project is to involve students not only in the classroom but beyond to improve themselves and their communities.

Mary Sue Topper of the Department of Environmental Protection's Environmental Education Section is offering workshops to assist teachers in using the materials. There is no cost for a teacher to attend the workshop and obtain the materials.

Workshops will be held at the following times and places:

-February 23rd at Allaire State Park (near Freehold) from 1:30 p.m. - 4:00 p.m.

-April 28th at the Pequest Trout Hatchery and Natural Resource Education Center (Oxford) at 10:30 a.m. and 1:30 p.m.

Call Mary Sue Topper at (609) 292-1475 for more information.

"The instructors
are qualified
and interesting . . ."

wildlife workshops for teachers

**Marine and Estuarine Wildlife-May 4,
5, and 6, 1984 at the Marine
Consortium, Seaville, New Jersey**

**Upland and Freshwater Wildlife-
June 1, 2, and 3, 1984 at the New
Jersey State School of Conservation in
Stokes State Forest, Branchville, New Jersey.**



These workshops are sponsored and conducted by the Department of Environmental Protection's Division of Fish, Game and Wildlife. These weekend workshops are designed to give teachers the background to teach environmental concepts using the wildlife resource. Rutgers University will award one graduate-undergraduate credit for those working on advanced degrees or wanting in-service training credit.

The courses are taught in the field by professional wildlife biologists. The May 4, 5 and 6 workshop will be held at the Marine Consortium at Seaville, New Jersey in Cape May County. It will concentrate on wildlife resources in the marine environment. The workshop on June 1, 2 and 3 will be held at the New Jersey School of Conservation and will emphasize upland and freshwater wildlife.

These wildlife workshops have been in operation for the past eight years and in that period over 1400 student (teachers) have taken the course.

**For further information and
registration forms contact:**

**N.J., Div. of Fish, Game and Wildlife
Wildlife Education Unit
Pequest Rd., R.R. 1, Box 389
Oxford, N.J. 07863**

NAME _____

ADDRESS _____

ZIP _____

PHONE _____

SCHOOL _____

ADDRESS _____

ZIP _____

GRADE _____

SUBJECT _____

Which workshop would you like more information
on?

_____ Marine & Estuarine

_____ Upland & Freshwater

Phone: 201-637-4125

RESEARCH RESULTS

Following are summaries of projects done last summer but not reported on in previous newsletters.

• Blue-Spotted Salamander •

Intensive development and the loss of habitat has caused the serious decline of the blue-spotted salamander and its hybrid the Tremblay's salamander found within the Passaic River Basin. Consequently, one of the primary objectives of the research has been to identify critical aquatic breeding habitats and terrestrial habitats.

Part of the breeding biology study involved differentiating between the blue-spotted and its hybrid via a chromosome count. The Tremblay's is an all-female population that breeds with male blue-spotted salamanders. The resultant offspring are all-female Tremblay's salamanders. A better understanding of the relationship between the two species is needed in order to evaluate the species' status in the Passaic River Basin.

• Wood Turtle •

The population dynamics of a Sussex County colony of this threatened species were monitored from April through November of 1983. Behavior of the turtles, components of their habitat and movements were identified in this study.

There is some indication that openings created in wooded areas by people are beneficial to the wood turtle. A railroad bed near a stream became a nesting site for an aggregation of 20 female wood turtles. Nests averaged 8 eggs apiece. It seems that the turtles use the stream from November - April for hibernating and become terrestrial during the warmer months of the year.

• Bog Turtle •

For over five years data on optimum bog turtle habitat has been collected from northern and central New Jersey. This year, that data was put to use in managing habitat for the endangered turtle on the Manasquan Wildlife Management Area in Monmouth County. To provide the open swamp situation needed by the bog turtle for breeding, saplings were cleared from the primary breeding area and rivulets. A positive response has been documented from smaller openings created on other locations; time will tell if the Manasquan Colony responds favorably.

• Eastern Tiger Salamander •

In an effort to expand a program developed at Higbee Beach, another tiger salamander pond was created this year on Greenwood Forest Wildlife Management Area at Howardsville by the Division's Bureau of Wildlife Management. This 100' X 150' pond will receive tiger salamander eggs from a population whose future habitat is in jeopardy. The ponds are designed to be temporary in nature and dry up in the late summer to eliminate predators.

A branding program was undertaken in June, 1983 to provide better information on the population dynamics of the Higbee tiger salamanders. As the salamanders left the pond, they were funneled alongside the pond by means of drift fencing into 8" X 10" pits where they were collected and branded. Over the course of the summer, 297 salamanders were marked.

On February 14, 1984, the first adult salamander of the year was captured by the drift fencing whilst on its way to the breeding pond. That salamander is likely the first of many to use the pond this winter for breeding.

• Long-Tailed Salamander •

In order to update knowledge of distribution, a literature search was conducted by Herpetological Associates in 1983. Field searches for the amphibian were also conducted.

Eighty-one locations of the long-tailed salamander have been identified from historical records and field updates. Wooded uplands with clean springs and seeps, caves and other protected areas are required by the species. Monitoring of known locations continues as more is learned of this salamander. Future work will be conducted to identify new locations and to determine the habitat requirements of this species.

• Pine Snake •

An opportunity surfaced this year to improve habitat for the threatened pine snake on the Colliers Mills Wildlife Management Area. A series of mounds were constructed during the months of June through September 1983 in the vicinity of the Turn Mill pond dam. The mounds will be used by the snakes to hibernate in.

• Piping Plover •

Follow-up studies on the success of breeding piping plovers from Cape May county were conducted this year by Anne Galli. Active locations declined from 17 in 1980 to 11 in 1983, a loss of 35%. The number of pairs county-wide declined from 51 in 1980 to 32 in 1983, a loss of 37% and the number of young produced declined from 47 in 1980 to 37 in 1983 for a drop of 21%. It is unclear whether this decline is indicative of a downward population trend or year-to-year variability.

The habitat characteristics of the nesting locations were described this year. Though nesting piping plovers tolerate a wide mixture of sand, grass and shrub, two-thirds of the sites contained at least 50 percent sand and grass. The shrub cover on the dune sites tended to be below 25 percent on most of the sites. In subsequent years, the county's population of piping plovers will be monitored to assess production trends and year-to-year variations. The methods used will be employed on a state-wide survey in future years.

• Least Tern •

This endangered species is now known to nest on only 21 sites along the Atlantic coast. In order to perpetuate colonies on protected areas, a project was initiated in 1983 by Dr. Joanna Burger, working under contract with the Endangered and Nongame Species Program.

Twenty tern decoys were used at Mike's Island, Cedar Bonnet Island and Island Beach State Park. These islands were chosen for their protected location and historical use by nesting terns.

Decoys at Mike's Island succeeded in attracting terns to nest. That island had not been used by terns since 1980. Least terns did not nest on Island Beach despite extensive decoy work.

Experiments conducted on Brigantine indicated that terns are more attracted by 20 decoys than by 10.

• Upland Sandpiper •

The results of surveys of grassland nesting birds conducted in 1981 and 1982 indicated that the upland sandpiper should receive special research consideration in 1983. This work was done by Peter Plage. Breeding habitat requirements, reproductive success and the extent of its utilization of various habitat types was examined.

Six sites located in Salem, Gloucester, Burlington, Hunterdon and Somerset Counties were chosen for intensive field investigations from April through July of 1983.

Open agricultural land and extensive lawn areas provide the best habitat for the upland sandpiper. The birds seem to prefer to nest in hay fields and lightly-grazed pastures.

BALD EAGLE HABITAT ASSESSED

An important bald eagle nesting and wintering habitat in Cumberland County has recently been studied by a team of specialists contracted by the Endangered and Nongame Species Program. "Bear Swamp" is a 1,500 acre parcel in Downe Township near the Delaware Bay. It is characterized by oak-pine, pitch pine, beech, swamp hardwoods and mature swamp forests as well as open fields and tidal marsh. Bald eagles may be the most noteworthy species using the area; however, many other animals also find suitable habitat in Bear Swamp, some of which have a declining or undetermined status.

Terrestrial Environmental Specialists, Inc. of Phoenix, New York completed the vegetation and wildlife assessment in November of 1983. Southern New Jersey is the northern-most limit of many plant and animal species identified by Terrestrial Environmental Specialists, Inc.

Potential habitat exists for the endangered bald eagle, Eastern tiger salamander, pine barrens treefrog, Southern gray treefrog, Northern pine snake, osprey, great blue heron, red-shouldered hawk, barred owl and red-headed woodpecker. Plans are being made for state acquisition of the site to protect it from development that could adversely affect these rare species.

Delaware and Raritan Estuaries Critical Shorebird Grounds

A study recently conducted by Rutgers University researcher Dr. Joanna Burger revealed mitigation procedures that could minimize any adverse impacts on shorebird numbers associated with energy development in the Delaware and Raritan Bay estuaries.

In a study commissioned by the Endangered and Nongame Species Program and funded through New Jersey Department of Energy, mitigation procedures were suggested in light of the importance of these estuaries for shorebirds. Dr. Burger determined the number of shorebird species using those estuaries as well as their spatial distribution, densities and temporal patterns.

Approximately 450,000 shorebirds of 22 species use the Delaware Bay area, principally during the months of May through July. Over 21,000 individuals of 21 shorebird species use the Raritan Bay estuary during their spring and late summer migrations.

Along the Delaware Bay, important

concentrations of shorebirds occur from Higbee Beach to Middle Marsh Cove in Cumberland County. Concentrations occur at Great Kills Harbor and from Chigarora Creek to Conaskonk Point in the Perth Amboy region of Raritan Bay. The species present in the greatest number on Delaware Bay include ruddy turnstone, sanderling and semi-palmated plover, all of which are common and abundant species in New Jersey.

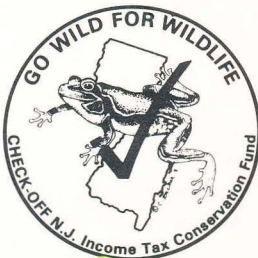
The findings also indicate that human disturbances can affect the distribution and abundance of shorebirds on the estuaries.

Mitigation measures call for the protection of those critical areas along Delaware and Raritan Bay during the peak migratory times of the year. Also called for in the report is the immediate containment of spills that occur in areas adjacent to high shorebird densities.

**N.J. Department of Environmental Protection
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Trenton, New Jersey 08625**



TO:



Endangered and Nongame Species Program